Key Competitiveness Indicators for new real estate developers

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Abstract

Purpose- This paper aims to explore the "Key Competitiveness Indicators (KCIs)" that provides the guidelines for helping new real estate developers (REDs) achieve competitiveness during their inception stage in which the organizations start their business.
Design/ methodology/ approach- The research was conducted using a combination of various methods. A literature review was undertaken to provide a proper theoretical understanding of organisational competitiveness within RED's activities and developed a framework of competitiveness indicators for REDs. The Delphi Forecasting Method (DFM) is employed to investigate a group of twenty experts' perception on the relative importance between competitiveness indicators.
Findings- The results show that the KCIs of new REDs are: 1) capital operation capability; 2) entrepreneurship; 3) land reserve capability; 4) high sales revenue from the first real estate development project; and 5) innovation capability.
Originality/value- The five KCIs of new REDs are new. In practical terms, the examination of these KCIs would help the business managers of new REDs to effectively plan their business by focusing their efforts on these key indicators. The KCIs can also help REDs provide theoretical constructs of the knowledge base on organisational competitiveness from a dynamic perspective, and assist in providing valuable experiences and in formulating feasible strategies for survival and growth.

Keywords
Delphi Forecasting Method; Real Estate Developers; Key Competitiveness Indicators; New organisations.

1 Introduction

The start-up period of an organisation is a critical time for any business. This is particularly relevant for real estate developers (REDs), where a large amount of capital is required (Mata and Portugal, 1994; Fielden *et al*., 2000). In a fiercely competitive market, only a small percentage of newly established organisations survive and even then very few of these can grow and thrive.

Becoming competitive is essential for the survival of new [1] REDs and the topic of competitiveness has been extensively covered in previous studies. These can be broadly classified into those based in *resource-based theory* (Wernerfelt, 1984; Barney, 1991; Powell, 2001; Newbert, 2008), *core competence-based theory* (Prahalad and Hamel, 1990; Sanchez and Heene, 2003), *dynamic capabilities theory* (Teece *et al*., 1997) and Porter's *competitive force theory* (Porter, 1990). Of these, Porter's competitive force theory assumes that organisations are homogeneous in their stocks of assets and capabilities (Barney, 1991), while the other three theories consider unique resources, core competences and internal and external "dynamic competences" as organisational core competitiveness (Wernerfelt, 1984; Prahalad and Hamel, 1990; Teece *et al*., 1997).

Several methods have been developed for analyzing competitiveness, including the *competitiveness index value* and *competitiveness indicator* approach. For example, the competitiveness of a nation is usually measured by an index value, which can be used to compare and rank a nation's level of competitiveness (IMD, 2004; World Economic Forum, 2004). Drew and Skitmore (1997) developed a multiple regression model, using major competitiveness indicators, for investigating organisational competitiveness for construction contracts. Walsh and Linton (2001), on the other hand, developed an indicator framework for analyzing a manufacturing organisation's competitiveness in terms of its technical competencies and managerial capabilities.

The *indicator analysis method* is considered to be one of the most effective approaches to addressing organisational competitiveness. This employs *key indicators* to measure organisational competitiveness, such as Key Competitiveness Indicators (KCIs), Key Performance Indicators (KPIs), Critical Success Factors (CSFs) and Core Competences (CCs). Although different terminologies are employed for each, they are used to guide organisations in improving their competitiveness. KPIs, for example, have been used in the form of compilations of measurements to assess the performance of construction operations (Cox *et al*., 2003). Similarly, the Department of Environment, Transport and Regions of the UK has advocated the use of KPIs for promoting the performance of construction industry generally (DETR, 2000). The use of CSFs has also been widely promoted (Ferguson and Dickinson, 1982; Boynton and Zmund, 1984; Tiong *et al*., 1992) from different perspectives. The identification of CSFs is considered to be important and effective in helping decision makers focus on a few key areas affected by decisions (Benchtell, 2002). Likewise, CCs have been described by Hamel and Prahalad (1994) as "a bundle of skills and technologies" that

[1] A RED in its initial set up period, or inception stage. The term *new RED* is used here throughout. Similarly, the term new RED is used to denote an RED in its initial set up period, or inception.

are used to highlight an organisation's competitive advantages, while Markides and Williamson (1994) define CCs as a pool of experience, knowledge, and systems that together act as catalysts in the creation and accumulation of new strategic assets.

Overall though, the KCI approach is the most commonly used among these various indicator methods. For example, a study by Holt *et al*. (1994) classifies competitiveness indicators into five groups: contractor's organisation, financial considerations, management resources, past experience, and past performance. Each of these groups also includes various specific indicators. Hatush and Skitmore (1997) proposed five major indicators for assessing contractor competitiveness for construction business, including financial soundness, technical ability, management capability, health and safety, and reputation. Shen *et al*. (2006) have also examined the key competitiveness indicators (KCIs) for assessing contractor competitiveness in the Chinese construction market.

Despite a considerable amount of research in competitiveness theory and methods, little is known of the competitiveness of different types of companies such as REDs and there are no reported studies that examine the relative importance of individual competitiveness indicators. In particular, the KCIs of new REDs have not yet been identified.

Therefore, this study aims to identify the KCIs of new REDs that act as the guidelines for helping firms operating business effectively in Chinese market. A literature review was undertaken to present a competitiveness indicator framework. Then a Delphi Forecasting Method (DFM) study was carried out with a group of 20 experts to identify the relevant KCIs. It is expected that this study will provide useful information and guidance for assisting new market entrants to identify their strengths and weaknesses in the market.

2 Research methods

The research was conducted using a combination of various methods. A literature review was undertaken to provide a proper theoretical understanding of organisational competitiveness within RED's activities and enable the establishment of a framework of competitiveness factors to be developed. A practical investigation was conducted involving the collection of research data from industry and the use of the Delphi Forecasting Method (DFM) to identify the KCIs. Although originally developed as a method for forecasting future events, DFM is often used in research as a means of eliciting and validating the views or judgments of a group of experts. The DFM was chosen for this study as business performance data of a new organisation are not usually available from recorded sources or statistical reports. The expert opinions were therefore the major information source for use in the analysis.

DFM has become an effective and common methodology for identifying the key factors among a number of individual factors by evaluating each factor's relative significance (Moungnoi and Charoenngam, 2003). This designed to extract the maximum amount of unbiased information from a panel of experts through the collective judgments of those involved by an iterative process of communication over several rounds (Chan *et al.*, 2001). Although these collective judgments are essentially subjective opinions, the result still provides a more reliable and unbiased perspective than simply relying on individual opinions or statements (Masini 1993).

The DFM method relies on the selection of suitable experts, the development of appropriate questions to be put to the experts, and the analysis of the experts' answers (Cabaniss, 2002;

Outhred, 2001) and has three typical features: anonymous responses; iteration and controlled feedback; and statistical group responses (Adnan and Morledge, 2003). This helps minimize the biasing effects of dominant individuals, irrelevant communications, and group pressure towards conformity. The most important consideration in using DFM is the identification and selection of potential members to constitute the panel of experts (Ludwig, 1997; Stone and Busby, 1996). The panellists were therefore carefully chosen according to the following criteria:

- Having sufficient working experience and knowledge in the real estate industry,
- Working for REDs for at least 7 years,
- Holding senior positions in their organisations and having witnessed the inception stage of their organisations.

DFM involves an iterative process of obtaining the judgments of the participants, providing a summary of these back to the participants and then obtaining the participants' revised judgements in the light of that feedback. This process continues for several rounds until the participants no longer wish to revise their judgements. Typically, the number of DFM rounds varies between two and seven (Rowe and Wright, 1999; Adnan and Morledge, 2003). Too many rounds waste panel members' time and stopping the process too soon can yield meaningless results (Schmidt, 1997), with three rounds usually being sufficient to adequately pool the opinions of experts (Alder and Ziglio, 1996). The majority of Delphi studies have used between 15-20 respondents (Ludwig, 1997). Ziglio (1996) opined that with a homogeneous group of experts, good results can be obtained even with a panel as small as 10-15 individuals.

The expert judgments are commonly recorded on Likert scale to rate the relative significance of individual factors (e.g., Chan and Kumaraswamy 1997; Shen and Liu 2003).

In applying DFM in the research, 20 experts were identified and effectively involved in the survey process which eventuated as three rounds. The panel members' profiles are shown in Table 2 (the experts' names and their organisations are not reported to for the sake of anonymity). The selected experts were considered to have had sufficient experience and expertise in managing REDs, and represent a wide spectrum of real estate business professionals to provide a balanced view. These experts hold senior positions in reputable organisations and have extensive working experience. Their credibility and experience improved and enhanced the validity of the Delphi survey process in this study.

The first round of the DFM involved the expert panel by both mail and e-mail in early October 2008. The invitation letter explained the objectives of the research, and invited the panel to participate in the study by responding to a prepared questionnaire. In the second round of the DFM, the panel was invited to assess the relative importance of each of the short-listed KCIs on a 5-point Likert scale. The panel completed the questionnaire in late November 2008. In Round 3, the panel was asked to reconsider the ratings of each KCIs in the light of the consolidated results from Round 2. The panel then completed and returned the questionnaires by the end of March 2009.

The questionnaires in each round sought answers to the following questions:

- Questionnaire 1: A shortlist at least 5 key competitiveness indicators of new REDs according to the panellist's own experience and expertise (Table 1 was attached for reference).

- Questionnaire 2: Ratings of the KCIs for new REDs according to their significance.

- Questionnaire 3: Re-ratings of the KCIs of new REDs in the light of the results of Round 2.

3 Establishing a framework of competitiveness indicators by applying the Delphi forecasting method (DFM)

A framework of competitiveness indicators was established in order to analyze the KCIs obtained through the DFM. As previous research has been conducted in developing various indicators for examining REDs' competitiveness, this was used to provide references for establishing the framework needed. Porter (1989), for example, uses two critical factors affecting REDs' competitive advantage - lower cost and differentiation. Low cost enables the organisation to finance and develop a project and deliver it at a lower cost, which allows it to obtain a higher margin at prevailing price levels. Differentiation, on the other hand, occurs when an organisation has some unique skills or resources that allow it to command a premium price. Adas (2002), on the other hand, presents a conceptual management growth model that can be used to manage a RED more effectively and thus achieve its dynamic competitiveness. In addition, Guo and Zhang (2003) believe that human resources, capital, the quality of housing product, customer services and brand are aspects that should receive the greatest emphasis for a RED cultivating its core competence.

With reference to the Chinese real estate market, a number of competitiveness indicators have been adopted, for example, in the reports "Blue book of China's enterprises competitiveness" (2006). These indicators are used through a mathematical formula for the calculation of a competitiveness index value. These indicators include sales revenue, the sales' annual average growth rate in recent three years, overall labour productivity and others. In another report, "Research report on Chinese Top10 real estate listed developers", produced jointly by the Real Estate Research Institute, the State Council Development Research Center and The Tsinghua University Real Estate Institute (2003), the major indicators used includes total assets, total market value, prime operating revenue and total profits. But these criteria are used for assessing listed REDs. There are still other references for examining a RED's competitiveness. For example, the joint report by "Guanghua School of Management in Beijing University" and "Shanghai Security News" (2006) have presented 8 indicators for identifying the major REDs in China, including return on equity, entrepreneurship, corporate structure, social responsibility and so on.

The above examination of various references led to the formulation of a more comprehensive framework of competitiveness indicators for new REDs. This framework includes 18 indicators, as listed in Table 1. The effectiveness of these 18 indicators and their relative significance are examined in detail in the following sections.

<Insert Table 1 here>

4 Results and analysis

Round 1 DFM: nominating key competitiveness indicators (KCIs)

In Round 1, the expert panel was invited to identify at least 5 KCIs (from the list in Table 1) which they believe are significant factors affecting the competitiveness of new REDs. Follow-up communications with the panel were made, including phone calls and emails, to ensure a good response. As a result, all of the 20 experts on the panel responded effectively, and all agreed to participate in further rounds of responses. Table 2 summarises the profiles of the panel of experts, including their years of working experience, organisation type and job positions.

<Insert Table 2 here>

Table 3 provides the results of the nominated KCIs by the panel. This shows that the panel provided different responses for different factors. For example, the factor "Entrepreneurship" (CF_{10}) is commonly agreed as a significant indicator by all except one of the panel. Some factors, such as CF_6 and CF_{18} are considered to be significant by only a few experts. In these cases where there is less than total agreement, a 50 percent agreement is commonly used as the minimum level for selecting significant indicators (Chan *et al*., 2001). Using this criterion, nine indicators were identified as KCIs. These are the highest ranked nine in the list in Table 3 comprising "Entrepreneurship", "Land reserve capability", "Capital operation capability", "Cost and quality control capability, "High sales revenue of first real estate project, "Strategic management capability", "The housing product R&D and promotion", "Coordination mechanism" and "Innovation mechanism".

<Insert Table 3 here>

Round 2 DFM: rating the short-listed KCIs

In the second round of the DFM, the panel were asked to rate the significance of each of the shortlisted nine KCIs identified in the first round DFM. The results are shown in Table 4. The relative importance of the indicators was established by ranking them according to their mean values.

To ensure the adequacy of the established relative importance in Table 4, the degree of agreement among of the panel's ratings was checked by Kendall's Coefficient of Concordance (W). Kendall's Coefficient of Concordance is widely used to indicate the degree of agreement between the panel members on the ordered list by mean ranks by taking into account the variations between the rankings (Doke and Swanson, 1995). When W is between 0.5 and 0.7, it is considered that the agreement among the panel experts is fairly significant (Schmidt, 1997). The result in Table 4 is that W= 0.528, and hence denotes a significant agreement between the panel members on their ratings provided.

<Insert Table 4 here>

The correlation matrix between the nine factors was also calculated (Table 5). This shows that all the correlations have a probability of less than 0.05, indicating that all individual indicators can be considered to be independent of each other. The one exception is KCI_4 with

a correlation of -0.548. However, testing at the 0.05 level is expected to produce one (incorrect) significant result in twenty and therefore this one anomaly is taken as not sufficient to disturbing the overall result. This provided an adequate basis for proceeding to the third Round, in which the nine KCIs were subjected to the panel's reconsideration.

<Insert Table 5 here>

Round 3 DFM: re-assessing the ratings

In round 3 of the DFM, the panel members were asked to re-assess their ratings on the nine factors with reference to the consolidated results obtained in round 2. In response, most of the panellists made adjustments to their previous ratings. As Table 6 shows, however, the experts' re-assessments have little effect on the overall indicator rankings. Kendall's Coefficient of Concordance (*W*) for the revised ratings is 0.721 – an improvement on the previous round. According to Schmidt (1997), this improvement in *W* indicates an increase in agreement of the panellists.

<Insert Table 6 here>

In previous studies, only indicators with a mean value of more than 4.0 have been treated as real KCIs (Cheng and Li 2002). Applying the same criterion here, results in the following five KCIs:

- Capital operation capability
- Entrepreneurship
- Land reserve capability
- High sales revenue of first real estate development project
- Innovation capability

5 Discussion

The analysis given in the previous sections led to the identification of five KCIs for new REDs in the PRC comprising capital operation capability, entrepreneurship, land reserve capability, high sales revenue of their first real estate development project, and innovation capability. Therefore, new REDs are expected to have competence particularly in these aspects in order to survive their inception stage. Considering the size limit of the paper, only the two highest rated KCIs – *capital operation capability* and *entrepreneurship* - are chosen for further illustration through some practical examples below.

Capital operation capability

The overall real estate market in China has been changing dramatically over years in which capital is the critical criterion for the REDs' survival. According to a Circular of the State Council of the PRC, "Adjusting the Capital Ratios of Fixed Asset Investment Projects in Real Estate Industry" (State Council of PRC, 2004), the capital ratio of fixed asset investment is raised to 35%, which presents difficulties in project financing for REDs. In particular, in the context of the recent global financial crisis, new entrants lacking equity funds have little

chance of gaining credit aid from banks. This makes it hard for them to survive in a fiercely competitive real estate market particularly during their inception stage. Start-up estate organisations normally occur as a result of their transfer from other industries or as new establishments. In the former case, most of the organisations have sufficient capital generated from their previous business activities.

An example is the *Youngor* company in Zhejiang Province, which demonstrates the significance of capital for a new RED. *Youngor* was formerly a non-RED business. It was founded in 1979 as a diversified development focusing on brand apparel. As a result of the good income from its business, in 1992, it started to become involved in the real estate market. As a new RED, it began with 3 million square metres of real estate development. With strong capital operation capability, *Youngor* bought a significant amount of land for real estate development. Land was relatively cheap at that time. By 1999, when *Youngor* completed its first group of developments, the land price increased dramatically which resulted in the business earning more than 40% gross margin . Obviously, the business could not have made such good profits without a good capital operation capability.

Youngor's powerful capital operation capability also helped achieve growth in size and scale. With the advantage of scale, *Youngor* could not only buy large areas of land but also invite famous designers to design innovative landscapes. For example, by relying on their capital capability, it was able to buy three large parcels of land in Ningbo and Suzhou in a single auction (Youngor Annual Report, 2007). Consequently, its substantial capital capabilities and land reserves provided it with a good funding platform for future development.

Entrepreneurship

Entrepreneurship is considered one of the KCIs for new REDs. The definition of entrepreneurship has been described in a variety of literatures. Schumpeter (1911), for example, defined entrepreneurship as "the assumption of risk and responsibility in designing and implementing a business strategy or starting a business". Alternatively, Gough (1969) stated that entrepreneurship "refers to a person who undertakes and operates a new organisation or venture, and assumes some accountability for the inherent risks". Entrepreneurship is not only confined to the manufacturing sector, but also operates in tertiary fields such as retailing, transport, finance and RED (Chau, 1993). Also, Smith (1967) concludes that the more opportunistic the entrepreneur and the more adaptive the organisation, the greater the likelihood that the entrepreneur will take an organisation through its inception stage. Baumol (1988) further opined that entrepreneurship is not imitative. This is echoed in the result of DFM, where entrepreneurship is ranked as the second most important KCI. When a RED initially enters the market, large amounts of capital funds need to be invested in the purchase of land. Thus, during this initial decision stage, entrepreneurs need to have the competence to make proper judgements when they consider buying land. The capability of the entrepreneur is particularly important for new businesses as many problems and uncertainties exist at this time and in a rapidly changing environment.

An example of this is *China Vanke Co Ltd*, headquartered in Shenzhen, which has been involved in developing residential buildings in 28 cities throughout China. *China Vanke* is the largest residential RED in China, and Wangshi, the head of *China Vanke*, is the most famous pioneering real estate entrepreneur in China. He has played a critical role in *China Vanke*'s development. In the early 1989, Wangshi and his team introduced revolutionary

reforms in the *China Vanke*'s history by overseeing a shareholding system transformation. This reform helped *China Vanke* raise 2,800 million yuan. By 1991, *China Vanke* was officially listed on the Shenzhen Stock Exchange (code: 0002). These two strategic decisions made by the entrepreneur Wangshi were regarded as the most significant events in *China Vanke*'s history. For example, before 1992, *China Vanke* was a multi-disciplinary business organisation, involving international trade, retail, mechanical, electronics and printing. Having analyzed its attractiveness and competitiveness among all its businesses, Wangshi and his managerial team chose the real estate industry as its major long-term development business. By the end of 1990s, they further decided to focus on commodity housing for the middle class as its sole business segment. These actions helped the organisation establish a leading role in the China real estate industry (Mao, 2007). In order to enhance its market competitive advantage further, Wangshi and his team introduced the 'Professional Managers System' in early 2000s. This new management system led to another new leading development stage for *China Vanke*. The experience by the entrepreneur Wangshi, is echoed with the comments made by Matsushita Konosuke[2] "During the start-up stage, I stand in front; the growth stage, I stand in the middle; while the later period, I stand behind".

6 Conclusions

The real estate business is one of the largest employment suppliers, and accounts for a significant proportion of the GDP, in most countries. There are always new firms who enter the business. Nevertheless, it is essential for these new REDs to identify and understand the KCIs. The successful survival of new entrants can inject new impetus into real estate industry and help improve the healthy development of the industry. The KCIs identified in this paper - namely, capital operation capability, entrepreneurship, land reserve capability, high sales revenue of their first real estate development project, and innovation capability - act as the major tools for evaluating competitiveness for the new firms in the Chinese real estate industry. This study presents a new approach for the business managers of new REDs to improve business competitiveness by utilizing organisation resources more effectively. The KCIs of new REDs identified in this research can also help fill the knowledge gap in the real estate competitiveness field.

These findings suggest that new REDs in China should emphasize more on these areas in order to start up their business successfully. The results can also furnish new REDs with factors to identify their competences in the market. This understanding will help select and adopt appropriate competitive strategy necessary to survive successfully in the real estate market.

Organisations particularly those from overseas who want to enter the Chinese real estate market can apply the KCIs to conduct a self-evaluation on their competitiveness, thus to decide whether or not it is the right time to engage in the business in the market.

However, it is appreciated that having a set of KCIs cannot fully eliminate the subjectivity of evaluation in different application environments. Different assessors may have their own interpretation on each KCIs. Thus the identification of the KCIs in this study provides guidelines rather than the unique solution for different types of firms. Although the data used for analysis in this study are from Chinese practice, the results provide references for

[2]Matsushita Konosuke, founder of the Panasonic Corporation, Japan.

studying organisational competitiveness of new REDs in other countries. Thus comparison can be gained, which could lead to experience sharing among those REDs who operate business in different countries.

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Table 1 A framework of Competitiveness Indicators (CIs)

Code	Competitiveness indicators	Key references
CI_1	Land reserve capability	Tan and He (2006); Bu (2007)
CI_2	Corporate governance	Jin (2006); Millstein (1998)
CI_3	Innovation technology	Kummerow and Chan (2005); Wang (2008)
CI_4	Capital operation capability	Gu and Zhang (2003); Bu (2007)
CI_5	Integrated capability	Xue (2006); Tong (2003); Tan and He (2006)
CI_6	Brand	Guo and Zhang (2003); Xue (2006); Bu (2007)
CI_7	The housing product R&D and promotion	Guo and Zhang (2003); Wang *et al*. (2007)
CI_8	Cost and quality control capability	Shieh and Wu (2002) ; Torbica and Stroh (1999); "Research report on Chinese Top10 real estate listed developers (2005)
CI_9	The high sales revenue of first real estate project	Wang *et al*. (2007); "The China Business Competitiveness Monitor (CBCM) System" (2006)
CI_{10}	Entrepreneurship	Duckett (1998); Hardin (1997); Adas (2002)
CI_{11}	Strategic management capability	Ehrmann and Kitchak (2003); Vandell (1998); Adas (2002)
CI_{12}	Coordination mechanism	Shieh and Wu (2002); Xue *et al*. (2007)
CI_{13}	Flexible marketing capability	Wang *et al*. (2007)
CI_{14}	Customer satisfaction	Westlund *et al*. (2005); Shieh and Wu (2002)
CI_{15}	Organisation learning capability	Peterson (1998)
CI_{16}	Information technology	Peterson (1998); Li and Wang (2006)
CI_{17}	Risk resisting ability	Adas (2002) ; "China Real Estate Assessment Center (2009).on in China" (2009)
CI_{18}	Regional expansion ability	"Research report on the most influential listed organization in China" (2006)

Table 2 Summary of the selected experts' profiles

Relevant working experience (yr)	**Organization type**	**Job position**
< 10 years (45%)	Private (65%)	General manager (30%)
10-15 years (40%)	State-owned (20%)	Deputy GM (40%)
16-20 years (15%)	Foreign-invested (15%)	Dept. manager (20%)
> 20 years (0)		Senior manager (10%)

Table 3 Result of Round 1 Delphi Survey

CFs for real estate organisations at inception stage	**No. of experts**	**Agreement percentage**	**Rank**
Entrepreneurship (CF_{10})	19	95%	1
Land reserve capability (CF_1)	18	90%	2
Capital operation capability (CF_4)	18	90%	2
Cost and quality control capability (CF_8)	17	85%	4
High sales revenue of first real estate project (CF_9)	15	75%	5
Strategic management capability (CF_{11})	13	65%	6
The housing product R&D and promotion (CF_7)	12	60%	7
Coordination mechanism (CF_{12})	11	55%	8
Innovation capability (CF_3)	10	50%	9
Integrated capability (CF_5)	9	45%	10
Flexible marketing capability (CF_{13})	9	45%	10
Organisation learning capability (CF_{15})	9	45%	10
Customer satisfaction (CF_{14})	8	40%	13
Corporate governance (CF_2)	7	35%	14
Risk resisting ability (CF_{17})	7	35%	14
Information technology (CF_{16})	6	30%	16
Brand (CF_6)	4	20%	17
Regional expansion ability (CF_{18})	2	10%	18

Table 4 Result of round 2 Delphi survey on the ranking of KCIs

The KCIs **for real estate organisations**	**Mean**	**Rank**
Capital operation capability (KCI_1)	4.85	1
Entrepreneurship (KCI_2)	4.75	2
Land reserve capability (KCI_3)	4.35	3
Innovation capability (KCI_4)	3.95	4
The high sales revenue of first real estate project (KCI_5)	3.8	5
The housing product R&D and promotion (KCI_6)	3.6	6
Coordination mechanism (KCI_7)	3.6	6
Strategic management capability (KCI_8)	3.55	8
Cost and quality control capability (KCI_9)	2.95	9

Notes：
Number (n)=20.
Kendall's Coefficient of Concordance (W)=0.528. Level of significance=0.001

Table 5 Correlations matrix among the nine KCIs (Round 2)

	KCI_1	KCI_2	KCI_3	KCI_4	KCI_5	KCI_6	KCI_7	KCI_8	KCI_9
KCI_1	1	.326	.015	-.548(*)	.110	-.210	-.315	.154	-.055
KCI_2		1	-.049	-.261	.183	-.350	.350	-.198	.182
KCI_3			1	.046	.288	-.026	.236	-.027	.368
KCI_4				1	-.390	.047	-.109	.163	-.170
KCI_5					1	.049	.172	-.133	-.051
KCI_6						1	.219	.254	-.065
KCI_7							1	.467(*)	.098
KCI_8								1	-.099
KCI_9									1

* Correlation is significant at the 0.05 level (2-tailed).

Table 6 Result of round 3 Delphi survey

The KCI s for real estate organisations	**Mean**	**Rank**
Capital operation capability (KCI_1)	5.0	1
Entrepreneurship (KCI_2)	4.7	2
Land reserve capability (KCI_3)	4.1	3
High sales revenue of first real estate project (KCI_5)	4.05	4
Innovation capability (KCI_4)	4.0	5
Coordination mechanism (KCI_7)	3.65	6
The housing product R&D and promotion (KCI_6)	3.6	7
Strategic management capability (KCI_8)	3.55	8
Cost and quality control capability (KCI_9)	3.05	9

Notes：

Number (n) =20.

Kendall’s Coefficient of Concordance (W) =0.721, Level of significance=0.000